



Massachusetts Department of Environmental Protection Source Water Assessment and Protection (SWAP) Report For Mill Pond Trailer Park

What is SWAP?

The Source Water Assessment and Protection (SWAP) program, established under the federal Safe Drinking Water Act, requires every state to:

- ? Inventory land uses within the recharge areas of all public water supply sources;
- ? Assess the susceptibility of drinking water sources to contamination from these land uses; and
- ? Publicize the results to provide support for improved protection.

SWAP and Water Quality

Susceptibility of a drinking water source does *not* imply poor water quality. Actual water quality is best reflected by the results of regular water tests.

Water suppliers protect drinking water by monitoring for more than 100 chemicals, treating water supplies, and using source protection measures to ensure that safe water is delivered to the tap.

Prepared by the
Massachusetts Department of
Environmental Protection,
Bureau of Resource Protection,
Drinking Water Program

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Table 1: Public Water System (PWS) Information

<i>PWS Name</i>	Mill Pond Trailer Park
<i>PWS Address</i>	40 Albany Road
<i>City/Town</i>	West Stockbridge, Massachusetts
<i>PWS ID Number</i>	1326001
<i>Local Contact</i>	Victor Gennari
<i>Phone Number</i>	(413) 232-7741

<i>Well Name</i>	<i>Source ID#</i>	<i>Zone I (in feet)</i>	<i>IWPA (in feet)</i>	<i>Source Susceptibility</i>
Well No. 2	1326001-02G	250	622	High

Introduction

We are all concerned about the quality of the water we drink. Drinking water wells may be threatened by many potential sources of contamination, including septic systems, road salting, and improper disposal of hazardous materials. Citizens and local officials can work together to better protect these drinking water sources.

Purpose of this report:

This report is a planning tool to support local and state efforts to improve water supply protection. By identifying land uses within water supply protection areas that may be potential sources of contamination, the assessment helps focus protection efforts on appropriate best management practices (BMPs) and drinking water source protection measures. Department of Environmental Protection (DEP) staff are available to provide information about funding and other resources that may be available to your community.

This report includes:

1. Description of the Water System
2. Discussion of Land Uses within Protection Areas
3. Recommendations for Protection
4. Attachments, including a Map of the Protection Areas

1. Description of the Water System

The well for Mill Pond Trailer Park is located northeast of Albany Road. There is municipal water and wastewater available in West Stockbridge, however only waste water disposal is available to the Mill pond facility. The Well No. 2 is a gravel developed well that was installed to replace a shallow dug well (Well No. 1). The well was installed and tested under the requirements of the New Source Approval Process. The well is within a confined aquifer, where there is a thick clay layer between the ground surface and the well screened in the sand and gravel.

What is a Protection Area?

A well's water supply protection area is the land around the well where protection activities should be focused. Each well has a Zone I protective radius and an Interim Wellhead Protection Area (IWPA).

- **The Zone I** is the area that should be owned or controlled by the water supplier and limited to water supply activities.
- **The IWPA** is the larger area that is likely to contribute water to the well.

In many instances the IWPA does not include the entire land area that could contribute water to the well. Therefore, the well may be susceptible to contamination from activities outside of the IWPA that are not identified in this report.

What is Susceptibility?

Susceptibility is a measure of a well's potential to become contaminated due to land uses and activities within the Zone I and Interim Wellhead Protection Area (IWPA).

The well has a Zone I radius of 250 feet and an Interim Wellhead Protection Area radius of 622 feet based on a approved withdrawal rate. The IWPA provides an interim protection area for a water supply well when the actual recharge area has not been delineated. The actual recharge area to the well may be significantly larger or smaller than the IWPA. There is a hydrogeologic barrier (clay layer) at least in the immediate vicinity of the well. However, unless this hydrogeologic barrier is known to exist throughout the IWPA, the aquifer is considered to have a high vulnerability to contamination. Nonetheless, the hydrogeologic barrier that does exist provides some protection relative to impeding the downward migration of contaminants from areas overlying the barrier. Please refer to the attached map of the Zone I and IWPA.

The well serving the facility has no treatment at this time. The DEP requires public water suppliers to monitor the quality of the water. For current information on monitoring results and treatment, please contact the Public Water System contact person listed above in Table 1 for a copy of the most recent Consumer Confidence Report. Drinking water monitoring reporting data is also available on the web via EPA's Envirofacts website at http://www.epa.gov/enviro/html/sdwis/sdwis_query.html.

2. Discussion of Land Uses in the Protection Areas

There are a number of land uses and activities within the drinking water supply protection areas that are potential sources of contamination.

Key issues include:

1. **Non-conforming Zone I;**
2. **Residential Land Uses;**
3. **Railroad Tracks; and,**
4. **Transportation Corridor**

The overall ranking of susceptibility to contamination for the well is high, based on the presence of at least one high threat land use or activity in the IWPA, as seen in Table 2.

1. **Non-conforming Zone I** – Currently, the well does not meet DEP's restrictions, which only allow water supply related activities or other non-threatening activities within the Zone I. The Zone I contains driveways, roads, parking spaces, and residences. Systems not meeting DEP Zone I requirements must notify the DEP, receive approval and address Zone I issues prior to increasing water use or modifying systems.

Table 2: Table of Activities within the Water Supply Protection Areas

Potential Contaminant Sources	Zone I	IWPA	Threat	Comments
Railroad Tracks	No	Yes	High	Herbicides: over-application or improper handling; fuel storage, transported chemicals, and maintenance chemicals: leaks or spills
Fuel Storage Above Ground	No	Yes	Moderate	Proper maintenance and upgrades to fuel oil tanks to prevent releases from occurring
Lawn Care/Gardening	Yes	Yes	Moderate	Encourage residents in proper storage, disposal, and application of pesticides.
Transportation Corridor	Yes	Yes	Moderate	Fuels and other hazardous materials: accidental leaks or spills; pesticides: over-application or improper handling

* -For more information on Contaminants of Concern associated with individual facility types and land uses please see the SWAP Draft Land Use / Associated Contaminants Matrix on DEP's website - www.state.ma.us/dep/brp/dws/.

Glossary

Zone I: The area closest to a well; a 100 to 400 foot radius proportional to the well's pumping rate. To determine your Zone I radius, refer to the attached map.

IWPA: A 400-foot to ½ mile radius around a public water supply well proportional to its pumping rate; the area DEP recommends for protection in the absence of a defined Zone I. To determine IWPA radius, refer to the attached map.

Zone II: The primary recharge area defined by a hydrogeologic study.

Aquifer: An underground water-bearing layer of permeable material that will yield water in a usable quantity to a well.

Hydrogeologic Barrier: An underground layer of impermeable material that resists penetration by water.

Recharge Area: The surface area that contributes water to a well.

Recommendations:

- ✓ Based upon the current location of homes it may not be possible to prohibit vehicle parking within the Zone I; however, Mill Pond Trailer Park should work toward prohibiting/limiting/impeding parking in close proximity to the well.
- ✓ Do not use or store pesticides, fertilizers or road salt within the Zone I.
- ✓ Direct driveway and parking lot drainage in the Zone I away from the well.

2. Residential Land Uses – Mill Pond Trailer Park and the surrounding residences are on town sewer. If managed improperly, activities associated with residential areas can contribute to drinking water contamination. Common potential sources of contamination include:

- **Household Hazardous Materials** - Hazardous materials may include automotive wastes, paints, solvents, pesticides, fertilizers, and other substances. Improper use, storage, and disposal of chemical products used in homes are potential sources of contamination.
- **Heating Oil/Kerosene Storage** - If managed improperly, Underground and Aboveground Storage Tanks (USTs and ASTs) can be potential sources of contamination due to leaks or spills of the fuel oil/kerosene they store. Require that fuel lines are sleeved to protect from leaks.
- **Stormwater** – Catch basins transport stormwater from roadways and adjacent properties to the ground. As flowing stormwater travels, it picks up debris and contaminants from streets and lawns. Common potential contaminants include lawn chemicals, pet waste, and contaminants from automotive leaks, maintenance, washing, or accidents.

Residential Land Use Recommendations:

- ✓ Educate residents on best management practices (BMPs) for protecting water supplies. Distribute the fact sheet “Residents Protect Drinking Water” available in Appendix A and on www.mass.gov/dep/brp/dws/protect.htm, which provides BMPs for common residential issues.
- ✓ Promote BMPs for stormwater management and pollution controls.
- ✓ Consider a bylaw requiring that replacement heating/hotwater systems not be fueled by fuel oil or kerosene. Encourage maintenance of those tanks that exist and encourage conversion to propane.

3. Railroad tracks - Railroad tracks cross the IWPA. Over-application or improper handling of herbicides on the railroad right-of-way is a potential source of contamination. Leaks or spills of transported chemicals or train maintenance chemicals are also potential sources of contamination to the water supply.

Recommendations:

- ✓ Work with local officials during their review of the railroad right-of-way Yearly Operating Plans to ensure that the portion of right-of-way within the facility IWPA is not sprayed with herbicides.
- ✓ Work with your local fire department to ensure that the IWPA is included in Emergency Response Planning.

4. Transportation Corridor - Major roads are potential sources of contamination due to salting of roadways and leaks or spills of fuels and other hazardous materials during accidents.

Recommendation:

- ✓ Contact the local fire department to ensure that the IWPA is included in Emergency Response Planning.

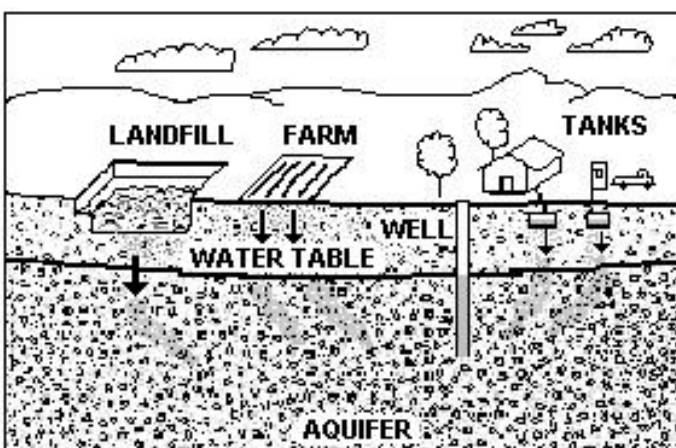


Figure 1: Example of how a well could become contaminated by different land uses and activities.

For More Information:

Contact Catherine Skiba in DEP's Springfield Office at (413) 755-2119 for more information and for assistance in improving current protection measures.

More information relating to drinking water and source protection is available on the Drinking Water Program web site at:

www.state.ma.us/dep/brp/dws/

Additional Documents:

To help with source protection efforts, more information is available by request or online at www.state.ma.us/dep/brp/dws/, including:

1. Water Supply Protection Guidance Materials such as model regulations, Best Management Practice information, and general water supply protection information.
2. MA DEP SWAP Strategy
3. Land Use Pollution Potential Matrix
4. Draft Land/Associated Contaminants Matrix

Copies of this assessment have been made available to the public water supplier and town boards.

Implementing the following recommendations will reduce the system's susceptibility to contamination.

3. Protection Recommendations

Implementing protection measures and best management practices (BMPs) will reduce the well's susceptibility to contamination. Mill Pond Trailer Park is commended for their past efforts to utilize municipal wastewater disposal, replacing the shallow well with a deep well, posting signs in the Zone I, and educating tenants on wellhead protection issues. The facility should continue efforts in water supply protection through reviewing and adopting the key recommendations above and the following:

Zone I:

- ✓ Keep non-water supply activities out of the Zone I.
- ✓ Restrict use of salt within Zone I and drain stormwater away from well.
- ✓ Consider well relocation if Zone I threats cannot be mitigated.
- ✓ Conduct regular inspections of the Zone I.
- ✓ Do not use or store pesticides, fertilizers or road salt within the Zone I.

Training and Education:

- ✓ Train staff on proper hazardous material use, disposal, emergency response, and best management practices; include custodial staff, groundskeepers, and certified operator. Post labels as appropriate on raw materials and hazardous waste.

Facilities Management:

- ✓ Implement Best Management Practices (BMPs) for the use of fertilizer, herbicides and pesticides on facility properties.
- ✓ For utility transformers that may contain PCBs, contact the utility to determine if PCBs have been replaced. If PCBs are present, urge their immediate replacement. Keep the area near the transformer free of tree limbs that could endanger the transformer in a storm.

Planning:

- ✓ Work with local officials in town to include the facility's IWPA in Aquifer Protection District Bylaws if the town establishes such bylaws in the future.
- ✓ Have a plan to address short-term water shortages and long-term water demands. Keep the phone number of a bottled water company readily available.
- ✓ Work with your community to ensure that stormwater runoff is directed away from the wells and is treated according to DEP guidance.

Funding:

The Department's Wellhead Protection Grant Program provides funds to assist public water suppliers in addressing Wellhead protection through local projects. Protection recommendations discussed in this document may be eligible for funding under the "Wellhead Protection Grant Program". For additional information, please refer to the

attached program fact sheet. Each program year, if funds are available, the Department posts a new Request for Response for the Grant program (RFR). Other funding opportunities are described in "Grant and Loan Programs: Opportunities for Watershed Protection, Planning and Implementation" at <http://www.state.ma.us/dep/brp/mf/files/glprgm.pdf>.

These recommendations are only part of your ongoing local drinking water source protection. Citizens and community officials should use this SWAP report to encourage discussion of local drinking water protection measures.

4. Attachments

- Map of the Public Water Supply (PWS) Protection Area
- Recommended Source Protection Measures Fact Sheet